



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/692,939	10/24/2003	James A. Lamb	200312021-1	2113
22879	7590	01/07/2009	EXAMINER	
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			ANYA, CHARLES E	
ART UNIT	PAPER NUMBER			
	2194			
NOTIFICATION DATE	DELIVERY MODE			
01/07/2009	ELECTRONIC			

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

JERRY.SHORMA@HP.COM
mkraft@hp.com
ipa.mail@hp.com

Office Action Summary	Application No. 10/692,939	Applicant(s) LAMB ET AL.
	Examiner Charles E. Anya	Art Unit 2194

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If no period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED. (35 U.S.C. § 133).

Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 14 October 2008.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-11 and 14-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-11 and 14-32 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)

2) Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) Information Disclosure Statement(s) (PTO/146/08)
Paper No(s)/Mail Date _____

4) Interview Summary (PTO-413)
Paper No(s)/Mail Date _____

5) Notice of Informal Patent Application

6) Other: _____

DETAILED ACTION

1. Claims 1-11 and 14-32 are pending in this application.

Claim Objections

2. **Claims 17-28 are objected to because of the following informalities:**

Claim 17 appears to include typographical error. Specifically, "...providing an application via an application layer having executable instructions to provide one or more applications to operating system layer having executable instructions to provide a first type of operating system and associated application program interfaces (APIs)..." on lines 2-6 of claim 17 includes typographical error or is unclear because it is not clear as to whether "...an application..." is different from "...one or more applications..." and what relationship exist between the "...application layer..." and the "...first type of operating system...".

For the purpose of this office action the Examiner would interpret and replace "...providing an application via an application layer having executable instructions to provide one or more applications to operating system layer having executable instructions to provide a first type of operating system and associated application program interfaces (APIs)..." with "...providing an application layer having executable instructions that includes one or more applications; providing an operating system layer having executable instructions that include a first type of operating system and associated application program interfaces (APIs)...".

Claim 23 appears to include typographical error. Specifically, "a" should have preceded the term "first type of operating system" on line 2 of claim 23.

For the purpose of this office action the Examiner would interpret and insert "a" before "first" and replace "a" with "the" on line 6 of claim 23.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 17-23 and 29-32 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The following terms lack antecedent basis:

- i. "the computing device" on line 8 of claim 17.

For the purpose of this office action the Examiner would interpret and replace "the computing device" with "a computing device"

- ii. "the home location register application" on line 11 of claim 17.

For the purpose of this office action the Examiner would interpret and replace "the home location register application" with "a home location register application".

- iii. "the application" on line 8 of claim 29.

For the purpose of this office action the Examiner would interpret and replace "the application" with "the telecommunication application".

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-3, 5-7, 9 and 23-27 are rejected under 35 U.S.C. 102(e) as being anticipated by U.S. Pub. No. 2002/0052727 A1 to Bond et al.

5. As to claim 1, Bond teaches a computing device, comprising:
a processor (figure 6); and
memory having instructions stored therein, that are executable by the processor (figure 6), to provide:
an application layer having executable instructions to provide one or more applications (User Mode 310, Native Applications 312a/b/c, Non-Native Applications 314a/b page 4 paragraphs 0068-0070);

an operating system layer having executable instructions to provide a first type of operating system and associated application program interfaces (APIs), wherein the associated APIs include a first number of APIs for operating on the first type of

operating system that is resident on the computing device (Kernel Mode 330/Native APIs 320/Native Kernel APIs 340 page 4 paragraphs 0068-0070/0073); and
an interface module coupled between the application layer and the operating system layer (Non-Native Kernel Emulator 400), wherein the interface module includes a second number of APIs for operating with a second type of operating system that is different from the first type of operating system (Non-Native APIs 322 page 4 paragraphs 0069-0071/0080) and wherein the interface module receives program instructions from a program in the application layer written for the second type of operating system and processes the instructions to select either, one of the first number of APIs or one of the second number of APIs ("...directs their calls to a non-native kernel..." page 4 paragraph 0071, "...Calls to the Kernel by Non-Native Applications..." page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130).

6. As to claim 2, Bond teaches the computing device of claim 1, wherein the interface module includes an operating system emulation module for emulating a number of operating system functions (Non-Native Kernel Emulator 400 page 3 paragraphs 0077-0081, page 5 paragraphs 0082-0087).
7. As to claim 3, Bond teaches the computing device of claim 1, wherein the interface module emulates operating system functions (Non-Native Kernel Emulator 400

page 3 paragraphs 0077-0081, page 5 paragraphs 0082-0087).

8. As to claim 5, Bond teaches the computing device of claim 1, wherein the interface module emulates intelligent network server functions ("...kernel emulator may also be practiced in distributed computing environments..." page 8 paragraphs 0145/0146).

9. As to claim 6, Bond teaches the computing device of claim 1, wherein the interface module has portions for emulating the operating system functions (Non-Native Kernel Emulator 400 page 3 paragraphs 0077-0081, page 5 paragraphs 0082-0087) and the network server functions in discrete modules located within the interface module ("...kernel emulator may also be practiced in distributed computing environments..." page 8 paragraphs 0145/0146).

10. As to claim 7, Bond teaches the computing device of claim 1, wherein the interface module processes a program instruction by interpreting whether the instruction has to be processed further (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

As to claim 9, Bond teaches the computing device of claim 7, wherein the application interface module translates the instruction received such that the operating

system can execute the instruction (“...directs their calls to a non-native kernel...” page 4 paragraph 0071, “...Calls to the Kernel by Non-Native Applications...” page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130).

11. As to claim 23, Bond teaches a method of executing an application (User Mode 310, Non-Native Applications 314a/b) configured for a platform having a first type of operating system on a platform having a second type of operating system (Kernel Mode 330/Kernel Functions 333) comprising:

communicating instructions from the application to an interface module (Non-Native Kernel Emulator 400), the application configured for the first type of operating system (“...directs their calls to a non-native kernel...” page 4 paragraph 0071, “...Calls to the Kernel by Non-Native Applications...” page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130);

interpreting the instructions from the application with the interface module by receiving program instructions from the application and processing the instructions to select either, one of a first number of APIs that are designed for use of the application on the first type of operating system and wherein the first number of APIs are resident on an operating system layer or one of a second number of APIs that are designed for use of the application on the second type of operating system and wherein the second number of APIs are resident on the interface module (“...the emulator kernel interprets...” page 4 paragraph 0060, “...Calls to the Kernel by Non-Native

Applications..." page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130); and

communicating the instructions from the interface module to an operating system that is the second type of operating system ("...passes the translated calls onto the native kernel..." page 5 paragraph 0087).

12. As to claim 24, Bond teaches the method of claim 23, wherein communicating instructions from the application to an interface module includes communicating instructions to an operating system emulation module within the interface module ("...directs their calls to a non-native kernel..." page 4 paragraph 0071, "...Calls to the Kernel by Non-Native Applications..." page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130).

13. As to claim 25, Bond teaches the method of claim 24, wherein interpreting the instructions includes directing an instruction from the operating system emulation module to an application program interface ("...the emulator kernel interprets..." page 4 paragraph 0060, "...Calls to the Kernel by Non-Native Applications..." page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130).

14. As to claim 26, Bond teaches the method of claim 23, wherein communicating instructions from the application to an interface module includes communicating

instructions to a network server emulation module within the interface module ("...kernel emulator may also be practiced in distributed computing environments..." page 8 paragraphs 0145/0146).

15. As to claim 27, Bond teaches the method of claim 23, wherein interpreting the instructions includes translating an instruction configured for the first type of operating system to an instruction configured for the second type of operating system (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

16. **Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2002/0052727 A1 to Bond et al. in view of U.S. Pat. No. 5,889,954 issued to Gessel et al.**

17. As to claim 4, Bond is silent with reference to the computing device of claim 1, wherein the interface module emulates home location register functions.

Gessel teaches the computing device of claim 1, wherein the interface module emulates home location register functions ("..."emulator"..." Col. 5 Ln. 10 – 20, Emulator-3 (14) Col. 5 Ln. 39 – 45).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bond with the teaching of Gessel because the teaching of Gessel would improve the system of Bond by allowing for a central

database that contains details of service subscribers that are authorized to use phone service core network.

18. Claims 8 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2002/0052727 A1 to Bond et al. in view of U.S. Pat. No. 6,725,451 B1 issued to Schuetz et al.

19. As to claim 8, Bond is silent with reference to the computing device of claim 7, wherein the interface module converts a result received from the operating system layer such that the converted result is in a format that the application program can use to execute the instruction ("...Result values..." Col. 4 Ln. 1 – 9).

Schuetz teaches the computing device of claim 7, wherein the interface module converts a result received from the operating system layer such that the converted result is in a format that the application program can use to execute the instruction ("...Result values..." Col. 4 Ln. 1 – 9).

It would have been obvious to one of ordinary skill the art the time the invention was made to modify the system of Bond with the teaching of Schuetz because the teaching of Schuetz would improve the system of Bond by allowing a client application to receive responses advising the client application concerning the processing by a secondary component/station of one or more command frames or client application request(s).

20. As to claim 28, Schuetz teaches the method of claim 23, wherein interpreting the instructions includes converting a result configured for the second type of operating system to a result configured for the first type of operating system ("...Result values..." Col. 4 Ln. 4 – 8).

21. Claims 10, 11, 14-18, 20, 22 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2002/0052727 A1 to Bond et al. in view of U.S. Statutory Invention Registration No. H1,921 to Fletcher et al.

22. As to claim 10, Bond teaches a system architecture, comprising:
a computing device including:
a processor (figure 6) and
memory having instructions stored therein, that are executable by the processor (figure 6), to provide:
an application layer having executable instructions to provide one or more applications (User Mode 310, Native Applications 312a/b/c, Non-Native Applications 314a/b page 4 paragraphs 0068-0070);
an operating system layer having executable instructions to provide a first type of operating system and associated application program interfaces (APIs), wherein the associated APIs include a first number of APIs for operating on the first type of operating system that is resident on the computing device (Kernel Mode 330/Native APIs 320/Native Kernel APIs 340 page 4 paragraphs 0068-0070/0073); and

an interface module (Non-Native Kernel Emulator 400) coupled between the application layer and the operating system layer, wherein the interface module includes a second number of APIs for operating the application with a second type of operating system that is not the type of operating system resident on the computing device (Non-Native APIS 322 page 4 paragraphs 0069-0071/0080) and wherein interface module receives program instructions from the application in the application layer written for the second type of operating system and processes the instructions to select either one of the first number of APIs or one of the second number of APIs ("...directs their calls to a non-native kernel..." page 4 paragraph 0071, "...Calls to the Kernel by Non-Native Applications..." page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130).

Bond is silent with reference to Bond is silent with reference to an application layer having a home location register application and a connection for connecting the computing device to a publicly switched telephone network (PSTN).

Fletcher teaches an application layer having a home location register application (Client Layer 310 Col. 7 Ln. 58 – 67, "...originating object..." Col. 11 Ln. 14 – 47) and a connection for connecting the computing device to a publicly switched telephone network (PSTN) (Switched Network 106 Col. 5 Ln. 60 – 67).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of Bond with the teaching of Fletcher because the teaching of Fletcher would improve the system of Bond by allowing for a central

database that contains details of service subscribers that are authorized to use phone service core network.

23. As to claim 11, Bond teaches the system architecture of claim 10, wherein the interface module has a number of modules to translate instructions between the operating system layer and the application layer (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

24. As to claim 14, Bond teaches the system architecture of claim 10, wherein interface layer includes an operating system emulation module that includes translation and interpretation information therein (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

25. As to claim 15, Bond teaches the system architecture of claim 10, wherein the system architecture further includes an operating system emulation module to direct art instruction from the application to an application program interface (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

26. As to claim 16, Bond teaches the system architecture of claim 10, wherein the system architecture further includes a number of component modules that can interface between an application designed for a second type of operating system and the operating system layer having a first type of operating system (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).
27. As to claim 17, see the rejection of claim 10 above.
28. As to claim 18, Bond teaches the method of claim 17, wherein processing the instructions from the application with the interface module includes using a list of instructions to be processed (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).
29. As to claim 20, Bond teaches the method of claim 17, wherein the application is configured for a Windows based operating system ("...Microsoft..." page 1 paragraph 0004/0005, page 3 paragraph 0053).
30. As to claim 22, Bond teaches the method of claim 17, wherein the method further includes identifying instructions to be translated by the interface module (Non-Native

Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

31. As to claim 29, Bond teaches a computer readable medium having a set of computer executable instructions thereon for causing a device to perform a method, comprising:

communicating instructions from an application to an interface module, the application configured for a first type of operating system APIs (“...directs their calls to a non-native kernel...” page 4 paragraph 0071, “...Calls to the Kernel by Non-Native Applications...” page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130);

processing the instructions from the application with the interface module by receiving program instructions from the and processing the instructions to select either, one of a first number of application programming interfaces (APIs) that are designed for use of the application on the first type of operating system and wherein the first number of APIs are resident on an operating system layer or one of a second number of APIs that are designed for use of the application on a second type of operating system and wherein the second number of APIs are resident on the interface module (“...directs their calls to a non-native kernel...” page 4 paragraph 0071, “...Calls to the Kernel by Non-Native Applications...” page 5 paragraphs 0085-0087, page 6 paragraphs 0103-0110, Steps 510-520 page 7 paragraphs 0130) and

communicating the instructions from the interface module to an operating system that is a second type of operating system ("...passes the translated calls onto the native kernel..." page 5 paragraph 0087).

Bond is silent with reference to a telecommunication application configured for a first type of operating system.

Fletcher teaches a telecommunication application configured for a first type of operating system (Client Layer 310 Col. 7 Ln. 58 – 67, "...originating object..." Col. 11 Ln. 14 – 47).

32. As to claim 30, Bond teaches the computer readable medium of claim 29, wherein communicating instructions from an application to an interface module includes communicating to an abstraction module within the interface module (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

33. As to claim 31, Bond teaches the computer readable medium of claim 29, wherein communicating instructions from an application to an interface module includes communicating instructions to a component module within the interface module (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

34. As to claim 32, Bond teaches the computer readable medium of claim 29, wherein the method further includes identifying instructions to be converted by the interface module (Non-Native Kernel Emulator 400 page 4 paragraphs 0060/0077-0081, page 5 paragraphs 0082-0087, page 6 paragraphs 0103-0114, page 7 paragraphs 0129-0134).

35. **Claims 19 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Pub. No. 2002/0052727 A1 to Bond et al. in view of U.S. Statutory Invention Registration No. H1,921 to Fletcher et al. as applied to claim 17 above, and further in view of U.S. Pat. No. 6,725,451 B1 issued to Schuetz et al.**

36. As to claim 19, Fletcher and Bond are silent with reference to the method of claim 17, wherein the application is configured for a Linux based operating system.

Schuetz teaches the method of claim 17, wherein the application is configured for a Linux based operating system ("...UNIX system call..." Col. 8 Ln. 26 – 38).

It would have been obvious to one of ordinary skill the art the time the invention was made to modify the system of Fletcher and Bond with the teaching of Schuetz because the teaching of Schuetz would improve the system of Fletcher and Bond by providing a portable, multi-tasking and multi-user in a time-sharing configuration of an operating system environment and client-server program model where essential elements in the development of the Internet and the reshaping of computing as centered in networks rather than in individual computers.

37. As to claim 21, Schuetz teaches the method of claim 17, wherein the application is configured for a UNIX based operating system ("...UNIX system call..." Col. 8 Ln. 26 – 38).

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Pub. No. 2002/0099532 A1 to Traut: directed to a process for the logical substitution of processor control in an emulated computing environment.

U.S. Pub. No. 2003/0101334 A1 to Desoli: directed to a method for integrating emulated native code.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles E. Anya whose telephone number is 571-272-3757. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on 571-272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Li B. Zhen/
Primary Examiner, Art Unit 2194

cea.